patients who recover to their pre-hospitalization EPO dose, post-hospitalization ESA dose increases frequently persist for several months, possibly due to missed ESA doses, lower Hb from hospital-related phlebotomy, or increased inflammatory states post-hospitalization. Strategies to address the causes of this should be evaluated.

PUK30

ONCE MONTHLY ERYTHROPOIESIS STIMULATING AGENT (ESA) DOSING MAY REDUCE ESA UTILIZATION COMPARED TO THRICE-WEEKLY ESA DOSING

Bond TC[1], Rubin JL[1], Wang X[1], Yang A[2]
[1]DaVita Clinical Research, Minneapolis, MN, USA, [2]Affymax, Palo Alto, CA, USA

OBJECTIVES: US dialysis centers typically dose ESA at every session (3x/wk), enabling frequent titrations. A once-monthly ESA is currently under FDA consideration. We recently demonstrated that more frequent Hb measurements and dose titrations are associated with higher ESA utilization. We developed an economic model to quantify the potential impact of switching from a 3x/wk ESA to one dosed monthly, due to fewer titrations and fewer Hb measurements, not considering other efficiencies (e.g., reduced administrations). **METHODS:** A cost-offset model estimated total ESA utilization and cost for monthly vs. 3x/wk dosing. Utilization inputs were derived from a retrospective study of prevalent (≥ 120 days), adult (> 18 years old) hemodialysis patients (n=78,730), dialyzing at a large dialysis organization between 01/01/09-12/31/10. Patients dosed 3x/wk experience 1.1 dose titrations and 2.9 Hb measurements on average per patient-month. Each additional monthly dose titration is associated with a 24.1% (95% CI: 21.5%-26.4%) increase in total ESA dose. Based on once-monthly ESA vs. 3x/wk ESA data (Provenzano et al., ASN 2011), we projected patients on a once-monthly ESA would experience 0.8 titrations and 1 Hb measurement per month, and projected savings-based reductions of mean titrations and tests. Price (derived from published sources), dose and clinical equivalence were assumed across ESAs. Model outcomes include incremental utilization and cost. **RESULTS:** The model predicts that switching patients to monthly ESA could result in a 7.95% (95% CI; 7.10%–8.73%) reduction in per-patient/month ESA utilization. This translates into savings of 5,322 (95% CI; 4,748–5,839 U) ESA units/month/patient and $52.37 (95% CI; $46.72–$57.46) per-patient/month. For an average facility (96 patients), we estimated ESA savings of 510,934 U/month and cost savings of $5,028/month. **CONCLUSIONS:** The model predicts that increasing the interval between ESA dose adjustments, based upon the FDA approval and administration of a once monthly ESA, could decrease ESA utilization.

PUK31

HOW COMMON IS CO-OCCURRING ED AND BPH IN A HEALTH CARE CLAIMS DATABASE?

Schoenfeld MJ, Shortridge E, Emmick JT, Shen W, Cui Z
Eli Lilly and Company, Inc., Indianapolis, IN, USA

OBJECTIVES: in the medical literature of co-occurrence of erectile dysfunction (ED) and benign prostatic hyperplasia (BPH) in men range from 20 to 80% depending on age, definition and severity of symptoms, and other patient characteristics studied. This study identifies the co-occurrence of these conditions, using healthcare insurance claims data, to provide payers with an estimate of these burdensome conditions. **METHODS:** Patients with ED and/or BPH were identified by diagnostic codes in the Thomson Reuters MarketScan® Database from January 1, 2007 to June 30, 2010. Patients in the sample were categorized as having BPH, ED, or co-occurring BPH and ED, and were examined by age group (younger men aged 40-64 and older men 65 and above). **RESULTS:** Of 685,270 men who met eligibility criteria, 531,486 (77.6%) were younger men and 153,784 (22.4%) were older men. Overall, 416,228 (60.7%) were diagnosed with ED (mean age 52.5), 336,432 (49.1%) were diagnosed with BPH (mean age 62.5), and 67,390 (9.8%) were diagnosed with both ED and BPH (mean age 60.3) in the study period. Among younger men, co-occurring ED and BPH accounted for 9.1% in men with ED or BPH, 13.4% in men with ED and 21.9% in men with BPH. Among older men, co-occurring ED and BPH accounted for 12.5% in men with ED or BPH, 34.3% in men with ED, and 16.5% in men with BPH. **CONCLUSIONS:** In this analysis, co-occurring ED and BPH varied in men by age. In younger men, co-occurring ED and BPH accounted for a greater percentage of those in the BPH cohort, whereas, in older men, co-occurrence accounted for a greater percentage of the ED cohort. This may be a reflection of coding in the claims data or may suggest that men may not seek treatment for both conditions or prioritize conditions differently as they age.

PUK32

LOWER CASE MIX ADJUSTERS ARE ASSOCIATED WITH LOWER ERYTHROPOIESIS-STIMULATING AGENT (ESA) AND OTHER BUNDLED COSTS

Sibbel SP[1], Rubin JL[1], Yang A[2]
[1]DaVita Clinical Research, Minneapolis, MN, USA, [2]Affymax, Palo Alto, CA, USA

OBJECTIVES: The CMS dialysis prospective payment system (PPS) uses patient characteristics and comorbidities to calculate payments. The final list of multipliers (case-mix adjusters; CMAs) was effective January 2011. We assessed patient CMAs and their relationship to ESA and other resource utilization covered by the PPS. **METHODS:** We conducted a retrospective analysis of adult (^{3} 18 yrs old) hemodialysis patients at a large dialysis organization from 1/1/2011-6/30/2011. Patient CMAs, ESA utilization, other bundled costs (IV medications and laboratory tests), and number of sessions attended were assessed for association with the PPS composite CMA. Differences in utilization were assessed in a stratified generalized linear model analysis across all months. Outlier payments were added to the base-payment for very high-cost patients. **RESULTS:** CMA values were strongly positively associated with per-session ESA utilization and per-session costs for other bundle components (p <0.001). ESA dose was 1.24 times higher for patients in the highest CMA category (>1.5) relative to patients in the lowest CMA category (<1.0). Patients in the lowest CMA category had mean additional bundled costs of $8.76 and patients in the highest category had a cost of $11.99 dollars (p <0.001). CMA values were inversely associated with number of attended sessions (11.75 attended sessions in the lowest CMA group vs. 10.16 in the highest; p <0.001). ESA use accounted for the highest proportion of total costs (0.598). **CONCLUSIONS:** This study shows a strong association between CMAs and ESA utilization, additional treatment costs, and missed sessions. Monthly average CMA values cluster tightly around 1.0, indicating most patients do not qualify for CMS-defined CMAs; however the strong association between CMA and resource utilization suggests an association between the CMA level and patients' treatment cost , therefore CMS should implement processes to help dialysis providers gain access to the underlying CMA conditions and diagnoses.

PUK33

COST-UTILITY ANALYSIS OF ALTERNATIVE TREATMENTS FOR MODERATE GRADE VESICOURETERAL REFLUX

Qureshi Z[1], Bennett C[2]
[1]University of South Carolina, Columbia, SC, USA, [2]South Carolina College of Pharmacy, University of South Carolina, Columbia, SC, USA

OBJECTIVES: To provide a cost-effectiveness analysis of treatments for moderate grade vesicoureteral reflux (VUR), an illness that accounts for an estimated $100 million in healthcare expenditures. Treatment options include antibiotics, nonsurgical endoscopic injection with dextranomer/hyaluronic acid, and surgical repair. **METHODS:** A systematic review using MEDLINE (search terms VUR, treatment, and cost) for 2006- 2011. **RESULTS:** Dextranomer/hyaluronic acid injection is the more cost-effective option compared to ureteral reimplantation when success rates for dextranomer/hyaluronic acid injection are 58% per ureter for patients with unilateral reflux and 75% per ureter for bilateral reflux. If increasing grades of reflux require increasing volumes of dextranomer/hyaluronic acid, success rates of 73% for unilateral reflux and 94% for bilateral reflux represent the break-point for cost-effectiveness. In models where dextranomer/hyaluronic acid injection is repeated if VUR does not resolve after initial injection, break-even success rates are 11% and 60% with unilateral reflux if success rates of initial injections were 70% and 55%, respectively. Break-even success rates for second dextranomer/hyaluronic acid injections are 29% and 77% per ureter with bilateral reflux, if success rates of initial injections are 70% and 55%, respectively. Based on 2011 epidemiologic estimates of 5580 children who are candidates for VUR treatments, dextranomer/hyaluronic acid injection endoscopic injections and clinical outcome success rates as reported in recent studies, potential annual savings with dextranomer/hyaluronic acid range from $1.5 million to $23 million. **CONCLUSIONS:** A nonsurgical approach is potentially associated with beneficial outcomes and cost-effectiveness. Longer-term studies are needed to refine the range of outcomes and downstream costs.

URINARY/KIDNEY DISORDERS – Research On Methods

PUK34

VALIDATION OF ICD-9 CODES FOR THE IDENTIFICATION OF PATIENTS WITH STAGE 3-5 CHRONIC KIDNEY DISEASE IN ADMINISTRATIVE CLAIMS DATA

Grabner M, Chen Y, Palli SR, Quimbo RA
HealthCore, Inc., Wilmington, DE, USA

OBJECTIVES: Testing the validity of ICD-9-CM codes to identify diabetic patients with stage 3-5 chronic kidney disease (CKD) in claims data. **METHODS:** We conducted a cross-sectional study using claims from a large commercial health plan. Patients meeting the following criteria were included: 1) diagnosis of type 2 diabetes; 2) ≥12 months of continuous health plan eligibility; and 3) ≥2 non-zero serum creatinine lab values, at least 90 days apart, between January 1, 2004 and June 30, 2011. We identified 12 ICD-9-CM code groups potentially indicative of CKD stage 3-5 and validated them against a "gold standard", defined as two laboratory claims, at least 90 days apart, with an estimated glomerular filtration rate (eGFR) <60 mL/min. eGFR was calculated using the CKD Epidemiology Collaboration equation and the Modification of Diet and Renal Disease (MDRD) equation. We calculated sensitivity, specificity, positive predictive value (PPV) and negative predictive value for the selected codes. Exact binomial 95% confidence intervals (CIs) were derived, and codes with a PPV whose lower CI bound was ≥ 80% were considered valid. **RESULTS:** The study sample consisted of 383,970 patients. Approximately 16% of the sample (N=61,052) had stage 3-5 CKD based on the "gold standard". ICD-9-CM codes for chronic renal failure, stage 3-5 (585.3-5), had a PPV of 84.2% (CI: 83.7% - 85.7%). ICD-9-CM code 585.6, used for end-stage renal disease, had a PPV of 84.7% (CI: 83.6% - 85.7%). ICD-9-CM code 285.21, used to describe anemia in CKD, had a PPV of 85.4% (CI: 84.6% - 86.2%). For the remaining code groups, PPV ranged from 50% to 78%, with CIs of ± 2 percentage points. Similar results were obtained when eGFR was calculated using the MDRD equation. **CONCLUSIONS:** This cross-sectional validation study suggests that diabetic patients with stage 3-5 CKD can be accurately identified in administrative claims data using selected ICD-9-CM codes.

PUK35

EQ-5D (UK AND THAI PREFERENCE WEIGHTS), SF-6D, AND VAS SCORES IN DIALYSIS THAI PATIENTS

Thaweethamcharoen T, Vasuvattakul S, Noparatayaporn P
Mahidol University, Bangkok, Thailand

OBJECTIVES: To evaluate the utility scores from EQ-5D (UK and Thai preference weight), VAS, and SF-6D in dialysis patients and to compare the correlation between these scores and the disease specific scores using KDQOL-36. **METHODS:** This study was a cross-sectional study. A Face-to-face interviews using EQ-5D and KDQOL-36 were conducted from April to August 2011 with 160 hemodialysis pa-